

[0079] The processor **858** causes a display screen to be produced on the display **860**. In one implementation, the display screen includes a selectable list of items (e.g., media items) from which a user may select one or more of the items. By the user providing a rotational action with respect to the rotational input device **854**, the list can be scrolled through. The processor **858** receives the signals pertaining to the rotational action from the rotation pickup unit **856**. The processor **858** then determines the next items of the list that are to be presented on a display screen by the display **860**. In making this determination, the processor **858** can take into consideration the length of the list. Typically, the processor **858** will determine the rate of the rotational action such that the transitioning to different items in the media list can be performed at a rate proportional to the rate of the rotational action.

[0080] The processor **858** can also control the audio feedback unit **862** to provide audio feedback to a user. The audio feedback can, for example, be a clicking sound produced by the audio feedback unit **862**. In one embodiment, the audio feedback unit **862** is a piezoelectric buzzer. As the rate of transitioning through the list of items increases, the frequency of the clicking sounds can increase. Alternatively, when the rate that the rotational input device **854** is turned slows, the rate of transitioning through the list of items decreases, and thus the frequency of the clicking sounds correspondingly slows. Hence, the clicking sounds provide audio feedback to the user as to the rate in which the items within the list of items are being traversed.

[0081] FIG. 9 shows the media player **700** of FIG. 7B being used by a user **920** in accordance with one embodiment of the invention. In this embodiment, the user **920** is linearly scrolling (as shown by arrow **924**) through a list of songs **922** displayed on the display screen **904** via a slider bar **923**. As shown, the media device **900** is comfortably held in one hand **926** while being comfortably addressed by the other hand **928**. This configuration generally allows the user **920** to easily actuate the rotational input device **910** with one or more fingers. For example, the thumb **930** and right-most fingers **931** (or left-most fingers if left handed) of the first hand **926** are used to grip the sides of the media player **900** while a finger **932** of the opposite hand **928** is used to actuate the rotational input device **910**.

[0082] Referring to FIG. 9, and in accordance with one embodiment of the invention, the rotational input device **910** can be continuously actuated by a circular motion of the finger **932** as shown by arrow **934**. For example, the finger may rotate relative to an imaginary axis. In particular, the finger can be rotated through 360 degrees of rotation without stopping. This form of motion may produce incremental or accelerated scrolling through the list of songs **922** being displayed on the display screen **904**.

[0083] FIG. 10A is a flow diagram of user input processing **1000** according to one embodiment of the invention. The user input processing **1000** is, for example, performed with respect to the computer system **650** illustrated in FIG. 7A or the media player **700** illustrated in FIG. 7B.

[0084] The user input processing **1000** displays **1002** a graphical user interface. Then, a rotational movement associated with a user input action is received **1004**. Here, the user input action is generally angular, as opposed to linear, and thus pertains to a rotational movement. As discussed in

more detail below, the rotational movement can be provided by the user input action. In one example, the rotational movement can be caused by a user acting to rotate a navigational wheel through a user input action. In another example, the rotational movement can be caused by a user's finger or a stylus being moved in a rotational manner through a user input action with respect to a touch pad. After the rotational movement has been received **1004**, the rotational movement is converted **1006** into a linear movement. The linear movement is then applied **1008** to at least one object of the graphical user interface. For example, the object of the graphical user interface can be a list, menu or other object having a plurality of selectable items. The linear movement can effect a scroll type action with respect to the object (e.g., list or menu). Alternatively, the linear movement can effect a level adjustment (e.g., volume adjustment) or position adjustment (e.g., slider bar position). After the linear movement has been applied **1008**, the user input processing **1000** is complete and ends.

[0085] FIG. 10B is a flow diagram of user input processing **1050** according to another embodiment of the invention. The user input processing **1050** is, for example, performed with respect to the computer system **650** illustrated in FIG. 7A or the media player **700** illustrated in FIG. 7B.

[0086] The operations **1052-1060** performed by the user input processing **1050** are similar to those like operations performed by the user input processing **1000** illustrated in FIG. 10A. Additionally, the user input processing **1050** operates to provide **1056** audible feedback corresponding to the rotational movements. In other words, as the rotational movement associated with user input action is received **1054**, audible feedback corresponding to the rotational movement is provided **1056**. Such audible feedback provides the user with feedback concerning the extent to which rotational movement has been input. In one embodiment, the rotational movement associated with user input action is converted into linear movement and applied to an object of a graphical user interface. For example, when the object of the graphical user interface is a multi-item list that is displayed for user scrolling and selection actions, the rotational movement associated with the user input action represents a distance traversed in the multi-item list. When acceleration is applied, the distance traversed is increased (e.g., multiplied). In one embodiment, the audible feedback is provided through a piezoelectric buzzer that is controlled by a processor (or other circuitry). For example, the audio feedback unit **862** shown in FIG. 8B can be a piezoelectric buzzer. The controller for the piezoelectric buzzer can, for example, be a processor of the computer system **650** or the media player **700**, or some other circuitry coupled to the piezoelectric buzzer.

[0087] FIG. 11 is a flow diagram of user input processing **1100** according to another embodiment of the invention. The user input processing **1100** is, for example, performed by a computing device, such as the computer system **650** illustrated in FIG. 7A or the media player **700** illustrated in FIG. 7B.

[0088] The user input processing **1100** begins by the display **1102** of a portion of a list of items together with a select bar. The select bar typically points to or highlights one or more of the items of the list of items. In general, the select bar can be associated with any sort of visual indication